

**AMENDMENTS TO THE CLAIMS:**

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1           1.       (Currently Amended) A system comprising:

2                   a controller that, when operably coupled to a light source emitting light at a  
3 selectively variable output power, determines an output power for emitted light based upon  
4 measurements of one or more of forward voltage and current across the light source, ambient  
5 temperature around the light source, and a factor specific to mounting of the light source.

1           2.       (Original) The system according to claim 1, wherein the forward voltage is employed  
2 to determine a forward current through the light source, and wherein the output power is determined  
3 based further upon the forward current.

1           3.       (Original) The system according to claim 2, wherein the forward current is measured,  
2 calculated or determined from a look-up table.

1           4.     (Original) The system according to claim 1, wherein the forward voltage is employed  
2     to determine a die temperature for the light source, and wherein the output power is determined  
3     based further upon the die temperature.

1           5.     (Original) The system according to claim 4, wherein the die temperature is calculated  
2     or determined from a look-up table.

1           6.     (Original) The system according to claim 1, wherein the output power is determined  
2     without measurement of emitted light.

1           7.     (Original) An optical subassembly including the system according to claim 1, the  
2     optical subassembly further comprising the light source and adapted for transmission of data over  
3     an optical transmission medium.

1           8.     (Original) A computer including the optical subassembly according to claim 7, the  
2 computer further comprising:  
3                 a processor coupled to the controller; and  
4                 a network connection through the optical subassembly to the optical transmission  
5 medium.

1           9.     (Currently Amended) A method comprising:  
2                 determining an output power for light emitted from a light source emitting light at a  
3 selectively variable output power, wherein the determination of the output power is based upon  
4 measurements of one or more of forward voltage and current across the light source, ambient  
5 temperature around the light source, and a factor specific to mounting of the light source.

1           10.    (Original) The method according to claim 9, further comprising:  
2                 employing the forward voltage to determine a forward current through the light  
3 source; and  
4                 determining the output power based further upon the forward current.

1           11.   (Original) The method according to claim 10, further comprising:

2                   measuring the forward current;

3                   calculating the forward current; or

4                   determining the forward current from a look-up table.

1           12.   (Original) The method according to claim 9, further comprising:

2                   employing the forward voltage to determine a die temperature for the light source;

3           and

4                   determining the output power based further upon the die temperature.

1           13.   (Original) The method according to claim 12, further comprising:

2                   calculating the die temperature; or

3                   determining the die temperature from a look-up table.

1           14.   (Original) The method according to claim 9, further comprising:

2                   determining the output power without measurement of emitted light.

1           15.   (Currently Amended) An optical subassembly comprising:  
2                   a light source emitting light at a selectively variable output power; and  
3                   a controller that, when operably coupled to the light source, determines an output  
4 power for emitted light based upon measurements of one or more of forward voltage and current  
5 across the light source, ambient temperature around the light source, and a factor specific to  
6 mounting of the light source.

1           16.   (Original) The optical subassembly according to claim 15, further comprising:  
2                   a temperature sensor proximate to the light source and coupled to the controller, the  
3 temperature sensor providing measurements of the ambient temperature for use by the controller.

1           17.   (Original) The optical subassembly according to claim 16, wherein the controller  
2 further comprises:  
3                   a voltage detector providing measurements of the forward voltage to the controller.

1           18.   (Original) The optical subassembly according to claim 17, wherein the forward  
2 voltage is employed to determine one or both of a forward current through the light source and a die  
3 temperature for the light source, and wherein the output power is determined based further upon one  
4 or both of the forward current and the die temperature.

1           19.   (Original) The optical subassembly according to claim 18, further comprising:  
2                   a memory communicably coupled to the controller, the memory containing one or  
3 both of a look-up table for the forward current and a look-up table for the die temperature.

1           20.   (Original) The optical subassembly according to claim 19, wherein the output power  
2 is determined without measurement of emitted light emitted by the light source.